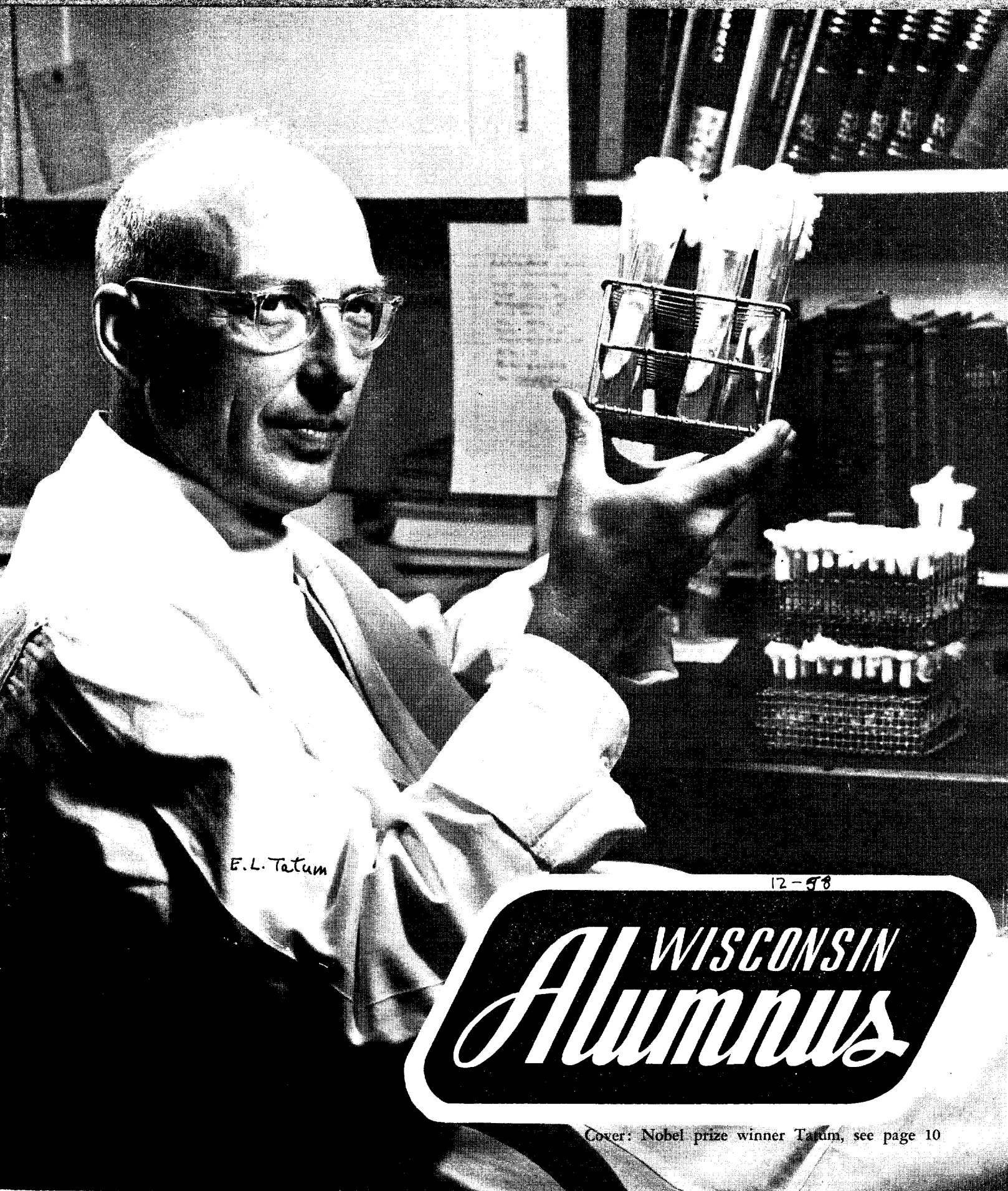


In This December, 1958, Issue:

- More Room in Residence Halls
- Alumni House Campaign Report



E. L. Tatum

12-58

*WISCONSIN*  
**Alumnus**

Cover: Nobel prize winner Tatum, see page 10



DR. JOSHUA LEDERBERG. AT NEWS CONFERENCE

## Wisconsin has two more

A Wisconsin alumnus and a Wisconsin professor, in October, became recipients of the Nobel prize for medicine.

They are biochemist Edward L. Tatum '29—holder of three UW degrees—and geneticist Joshua Lederberg.

It was the first time this honor had ever fallen to a Wisconsin faculty member. Not so for alumni. Just two years ago John Bardeen '28, became a Nobel prizewinner in physics as a result of his pioneer work on electronic transistors.

Drs. Tatum (like Bardeen, the son of a University faculty member) and Lederberg gained recognition for demonstrating that bacteria possess mechanisms for sexual recombination—a method of exchanging genetic material similar in fundamental respects to higher organisms.

In other words, they discovered sex in bacteria.

Currently, Dr. Tatum is with the Rockefeller Institute in New York City; he had been on the Stanford University faculty for a number of years. As it happens, Dr. Lederberg will soon be on that same Stanford faculty as head of a new medical genetics department (the same position he holds at Wisconsin.) He had announced his forthcoming February

PROFESSOR LEDERBERG  
UNDERGOES A PRESS CONFERENCE

Such work is fundamental to practical application. It's like having to learn the language before learning to read Shakespeare.

Wisconsin is one of the finest Universities in the country, from all points of view, in my opinion.

Dr. Lederberg, do you enjoy this sudden limelight, and, particularly, talking to reporters?  
Prof. Lederberg: No.



george richard photos

# Nobel prize winners

1956 NOBEL PRIZE WINNER, JOHN BARDEEN '28



move to Stanford some months ago, indicating that his main reason was the better genetic research possibilities, in terms of facilities and personnel, at that university.

Both Drs. Tatum and Lederberg paid high tribute to the cooperation they received from others in the work that led to their \$41,420 prize, in which they share with Dr. George W. Beadle of California Tech. Said Dr. Tatum: "It is quite an overwhelming feeling, naturally. It is always gratifying to a scientist to have his work recognized and to feel that his work has contributed to human welfare and knowledge. I am sure I express the feelings of my colleagues when I say that it makes me proud and humble to represent America in the field of international research and understanding."

It was back in 1946 that Lederberg and Tatum first got together, in the latter's laboratory at Yale. Tatum was a pioneer in the study of biochemical genetics and he invited Lederberg—then a second year medical student at Columbia university—to work in his laboratory for a few months. These months lengthened into about a year; during this time Lederberg developed a selective test for recombination of bacteria, using the principle of drug resistance.

*(continued on page 35)*

## two more Nobel prize winners

(continued from page 11)

Working with certain strains of a bacteria species known as *Escherichia coli*, Lederberg and Tatum mixed two different strains in a culture. Thereupon they observed a third strain possessing characteristics of each of the different original strains.

Lederberg recently explained some significance of this discovery to *Wisconsin State Journal* writer Donald Davies:

"Up until 1946, there were literally no works on genetics of bacteria; no genetic analysis had been made. It was not an issue that was discussed because no one questioned the seemingly valid fact that bacteria reproduced only by vegetative division. The field lay dormant. The experiments that we did could have been done 50 years ago, but were not."

With the sexuality in bacteria proven, an entire new concept of microorganisms can be developed.

In principle, strains of bacteria can be made to order, as molds, plants and animals are now "reconstructed". In fact, some of this breeding has already been begun. Production of drugs is one of its most immediate applications, and a member of the Nobel Prize committee was reported to have hailed the Lederberg-Tatum work as being important in the search for a cancer cure.

Dr. Tatum's laboratory at Yale, by the way, not only served as locale for the beginning of Nobel prize winning experiments. It was where Lederberg met his wife, Esther, who has since been an invaluable project associate of her husband. She has become an alumnus of Wisconsin since her arrival on the campus in 1947, when her husband accepted a post as assistant professor of genetics. She was granted her Ph.D. degree in genetics in 1950.